entirely. The opinion of the surgeon should be invoked in justice to the patient.

In some of the malignant tumors of the neck it is well nigh hopeless to undertake anything except some such treatment as the x-ray for its mental or analgesic effect, and yet some years ago I removed as much of a cancer of the thyroid as I could to relieve a tightly compressed trachea and sent the patient back to the Provinces wearing a tracheotomy tube. A little over two years later, she sent the worn-out tube to me to be repaired, but before a new one could be returned, she choked up and died having lived comfortably and actively all that time with the exception of a few weeks.

To enter into a discussion of the value of the x-ray or Coley's serum would take us far from our subject. I personally feel that the Coley serum is still too uncertain for employment except in cases beyond surgery, and that the x-ray is already doing more harm than good, except in very limited types. I hesitate to advise the use of either where I conscientiously believe that as good or better temporary results can be obtained by operation.

In conclusion, let me beg of my medical friends to yield to the fact that cancer, wherever situated, is a surgical disease, especially in its early stages; that up to the present time surgery, and to a less extent, the x-ray, are the only and best known forms of treatment that promise permanent or temporary relief; that the outlook for success depends upon the early resort to surgery where operation is available; that the surgeon should be the judge as to the possibilities of surgical treatment. To the surgeon I would appeal for a little more optimism in dealing with the apparently hopeless cases. I would ask him to consider the discouraging outlook less, and to be ready to struggle in behalf of these hopeless unfortunates a little more. To the patient I would appeal to accept the fact that cancer is incurable in a majority of cases; that the well-trained physician or surgeon will help him more honestly, more honorably and more successfully than the untrained charlatan who has done, and seems likely to do, infinitely more harm than can be calculated by any human mind.

A BRIEF CONSIDERATION OF SOME OF THE RESULTS OF THE SURGICAL TREATMENT OF CANCER OF THE STOMACH.

BY R. H. FITZ, M.D., BOSTON.

MALIGNANT disease produces such a variety of suffering according to the nature and seat of the disease, its duration, the personality and surroundings of the patient, that I shall limit myself solely to the question of the humane treatment of the latter stages of recognized malignant disease involving the stomach.

It is assumed that the diagnosis is clear, the prognosis certain, and that the question relates simply to the use of medical or surgical methods to make dying as free from suffering as possible.

Three years ago I made an inquiry into the degree and duration of any relief which may have resulted from the surgical treatment of cancer of the stomach at the Massachusetts General Hospital during a given period of years. The evidence obtained offered grave doubts as to any considerable benefit from the operations in question in this vicinity during that period. The possibility of a more encouraging outlook was admitted, but it was hoped that fewer operations might become necessary for diagnosis and that more might be followed by relief.

In the series tabulated by me were fourteen operations for cancer of the stomach. "These included four gastrostomies, all the patients, with the exception of one not heard from, dying within two months, and four pylorectomies, one of which was not heard from, two died within the first month after the operation, and the fourth was relieved for several months. At the end of six or eight months, however, the last patient began to fail and died at the end of a year and a half. Of the six gastro-enterostomies, four died within seventeen days, one received no relief whatsoever and after twelve weeks of terrible suffering passed away." The sixth felt quite well for about two months after the operation. He was then confined to the bed for the greater part of the time and "suffered untold agony" till his death nine months later. Thus 64% of these patients operated upon for cancer of the stomach died within two months, and two thirds of the cases of gastro-enterostomy died within seventeen days after the operation.

These were the early days of gastro-intestinal surgery in this region, and it was neither to be expected nor to be desired that the zeal of the surgeon should be checked by such a presentation, especially since a lower operative mortality had been obtained elsewhere, although the degree and duration of the relief were not so definitely stated.

The recent communication of Dr. J. C. Munro to the Massachusetts Medical Society, therefore, is an important contribution to the subject in question. It presents a large amount of valuable material without attempt at selection, gives sufficient data to enable certain comparisons to be made and thus enables his experience to serve as a guide for others.

An exploratory laparotomy was performed in thirty-one cases of malignant disease involving the stomach, obviously with the purpose of affording relief should the conditions prove favorable, since the diagnosis must have been sufficiently clear from the evidence presented.

In ten of the cases no further operation was warranted. Two of these patients died within two days after the operation and two more within the subsequent twelve days. One patient died after some weeks, another lived two months, while the subsequent history of the remaining four is not given.

It may be interpreting the given facts incor-

* Read at a meeting of the Boston Medical Library in conjunction with the Suffolk District Branch of the Massachusetts Medical Society, Oct. 7, 1904.

rectly, but I read that the patient who lived two weeks was relieved of pain before the operation by soft food. The patient who lived some weeks so improved before the operation under rectal feeding that he was able to take a fair amount of nourishment by the mouth. The immediate mortality of the exploratory operation in these cases seems to have been from 20% to 40%, surgery gave no relief and all the cases whose subsequent history is given were dead within two months after the exploration.

From the series of twenty-two cases of exploratory laparotomy with additional operative procedure one may be withdrawn as apparently representing the effects of carbolic acid poisoning. Of the remaining twenty-one, eight died within a fortnight after the operation, one seventeen days after, another several days later, another shortly after, another five weeks after and another several weeks later. One died after three and one-half months and another after several months. One is reported in excellent condition several weeks later, another is comfortable five months after the operation, another has relief for nine months and another is in good condition and hard at work at the end of a year, while of two, the subsequent history is unknown.

The operative mortality in this series of cases evidently is high, for eleven of the patients appear to have died within the month following the operation and five within four days after it. There may be a difference of opinion as to what shall be called the operative mortality, but the fact is significant that at least one half of the patients died within the month following the operation. In this series were eighteen cases of anastomosis. Eight of them died within two weeks, a mortality of 44%; one died at the end of five weeks with relief for two weeks only. On the other hand one patient was relieved for several months, another for nine months, and another was in good condition and hard at work a year after the operation.

The above-mentioned facts may be tabulated as follows for the sake of ready comparison and inference:

From records of the Massachusetts General Hospital between 1890 and 1900:

No. of patients heard from	12
Deaths within 2 months	9
Lived 3 „	1
„ 11 „	1
„ 18 „	1
No. of patients not heard from	2

From Dr. Munro's communication to the Massachusetts Medical Society, June, 1904:

No. of patients heard from	25
Deaths within 2 months	19
Lived 3½ months	1
Lived several months	1
Alive and comfortable several months later	1
„ „ „ 5 months later	1
„ „ „ 9 „ „	1
„ „ „ 12 „ „	1
No. of patients not heard from	6

Hence of the 37 patients subsequently heard from, 28 died within two months after operation and only one is stated to have been in good condition at the end of twelve months. Equally good, if not better, results are known to follow the medical treatment of such cases.

It would appear from this experience that merely exploratory operations in advanced malignant disease involving the stomach have a considerable mortality, afford no relief and are followed by an early death.

That explorations in such advanced cases followed by operations intended to relieve symptoms have a high mortality, and that in the survivors, relief is inconstant though sometimes prolonged at least a year.

It may be admitted that the surgical treatment of advanced cases of malignant disease of the stomach is humane because it sometimes gives more or less prolonged relief, and often shortens the period of suffering even if it gives no considerable relief.

On the other hand, the treatment of such cases by other than surgical methods often gives more or less prolonged relief and usually makes dying easy.

It may be more humane to treat every case surgically, what ever its condition at the time, or to administer a lethal dose to an incurable and suffering patient. Should the choice lie between the two methods, the latter has certain advantages in its favor.

A NEW METHOD OF PERFORMING GASTRO-ENTEROSTOMY.*

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THE operation of gastro-enterostomy has been found, clinically, to give relief to a large number of cases of ulcer of the stomach. Several theories have been advanced to explain the success of this operation, the most noteworthy of which is founded upon the assumption that the artificial drainage into the intestine will side-track the food and prevent it from passing over the ulcer on its way to the pylorus. This drainage might occur, (1) by mere gravity, (2) under the influence of the contractions of the stomach. Experimental observations have apparently proven that drainage by gravity is regulated, largely, by the intra-abdominal tension. The great difficulties which stand in the way of accurately determining the relative tensions of these two organs has led to a disregard of the results reported. On the other hand, the muscular action of the stomach is better understood. The peristaltic waves converge at the pylorus [1] and, if this opening be patent, it is to be presumed that food will prefer the natural to the artificial outlet. Side-tracking of the gastric contents, under these conditions, cannot wholly explain the abatement of symptoms because the food must still pass

* Fourth paper of series.

[1] Cannon: Am. Jour. of Physiology, Vol. i, 1898.